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EXAMINER	
SINGH, SATWANT K	

ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/646,819	SUGISHITA ET AL.	
	Examiner	Art Unit	
	Satwant K. Singh	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/25/03, 08/26/05, 10/31/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 27 is objected to because of the following informalities: Claim 21, line 4 recites "off-lien state". It appears to the examiner that the claim should recite "off-line state". Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-14, 19-21, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukuta (US 6,226,095).

3. Regarding Claim 1, Fukuta discloses a apparatus for forming an image (image processing apparatus 110), in which hardware resources for use in the forming of images are provided, and one or more processes run based on programs in respect of the forming of images (color copying machines 120, 121), said apparatus comprising: an off-line unit which puts said one or more processes in a off-line state in which restriction is placed on the running of said one or more processes (one color copying machine cannot perform actual printing because of an engine error); a memory area releasing unit which releases one or more memory areas used by said one or more processes that are put in the off-line state (entire memory is allocated to the PDL developing task corresponding to the other color copying machine capable of printing);

and a data laying-out unit which lays out data in said one or more memory areas released by said memory area releasing unit (PDL developing task) (col. 9, lines 39-49).

4. Regarding Claim 2, Fukuta discloses an apparatus, wherein said data laying-out unit prompts said off-line unit to put said one or more processes in the off-line state as preparation for laying out the data in said one or more memory areas (Fig. 8, S802, image processing apparatus notified of the error) (col. 11, lines 12-26).

5. Regarding Claim 3, Fukuta discloses an apparatus, wherein said data laying-out unit prompts said memory area releasing unit to release said one or more memory areas used by said one or more processes that are put in the off-line state, after said off-line unit puts said one or more processes in the off-line state (Fig. 9, S904, change memory allocation) (col. 13, 12-21).

6. Regarding Claim 4, Fukuta discloses an apparatus, wherein said off-line unit sends an off-line-shift request to said one or more processes for putting said one or more processes to the off-line state (Fig. 9, S908, develop PDL data for copying machine having error) (col. 13, lines 12-21).

7. Regarding Claim 5, Fukuta discloses an apparatus, wherein said off-line unit notifies said data laying-out unit whether said one or more processes are in the off-line state, upon receiving a response from said one or more processes responding to the off-line-shift request (Fig, 8, S802 image processing apparatus notified of the error) (col. 11, lines 12-26).

8. Regarding Claim 6, Fukuta discloses an apparatus, wherein said off-line unit notifies said data laying-out unit that said one or more processes are in the off-line

state, after all said one or more processes having received the off-line-shift request shift to the off-line state (Fig. 8, S808, busy state displayed) (col., 11, lines 27-33).

9. Regarding Claim 7, Fukuta discloses an apparatus, wherein said off-line unit notifies said data laying-out unit that said one or more processes did not shift to the off-line state, after a notice indicating inability to shift to the off-line state is received from said one or more processes having received the off-line-shift request (Fig. 8, S805, local copy processing is executed) (col. 11, lines 12-26).

10. Regarding Claim 8, Fukuta discloses an apparatus, wherein said off-line unit notifies said data laying-out unit that said one or more processes did not shift to the off-line state, after waiting for a response from all of said processes having received the off-line-shift request, even when a notice indicating inability to shift to the off-line state is received from one or more of said processes having received the off-line-shift request (Fig. 8, S805, local copy processing is executed) (col. 11, lines 12-26).

11. Regarding Claim 9, Fukuta discloses an apparatus, wherein said off-line unit notifies said data laying-out unit that said one or more processes did not shift to the off-line state, after a notice indicating inability to shift to the off-line state is received from one of said one or more processes having received the off-line-shift request, without waiting for a response from others of said one or more processes having received the off-line-shift request (Fig. 8, S805, local copy processing is executed) (col. 11, lines 12-26).

12. Regarding Claim 10, Fukuta discloses an apparatus, wherein said off-line unit measures a time lapse from the sending of the off-line-shift request to said one or more

processes, and notifies said data laying-out unit that said one or more processes are in the off-line state after a predetermined length of the time lapse even if no response to the off-line-shift request is received from said one or more processes (Fig. 8, S805, local copy processing is executed) (col. 11, lines 12-26).

13. Regarding Claim 11, Fukuta discloses an apparatus, wherein said one or more processes are allowed to run without said restriction after said off-line unit cancels the off-line state (Fig. 9, S910, engine error cancelled) (col. 13, lines 12-25).

14. Regarding Claim 12, Fukuta discloses an apparatus, wherein said restriction involves preventing an action by said one or more processes responding to a request from another process (Fig. 6, S602, receive only PDL data for copying machine having no error) (col. 10, lines 10-16).

15. Regarding Claim 13, Fukuta discloses an apparatus, wherein said one or more processes having shifted to the off-line state registers the request from another process (Fig. 9, S908, develop PDL data for copying machine having error) (col. 13, lines 12-25).

16. Regarding Claim 14, Fukuta discloses an apparatus, further comprising a process terminating unit which terminates said one or more processes having shifted to the off-line state (Fig. 14, S1409, 1408, save developed data and release memory) (col. 16, lines 11-21).

17. Regarding Claim 19, Fukuta discloses an apparatus, wherein said memory area releasing unit releases memory areas that are no longer used after said process

terminating unit terminates said one or more processes (Fig. 14, S1409, 1408, save developed data and release memory) (col. 16, lines 11-21).

18. Regarding Claim 20, Fukuta discloses an apparatus, wherein said memory area releasing unit releases the memory areas according to size of said data that is to be laid out (Fig. 18, S1809, 1810, S1808) (data compressed and saved in HDD, frame memory is released) (col. 18, lines 66-67, col. 19, lines 1-6).

19. Regarding Claim 21, Fukuta discloses an apparatus, wherein said memory area releasing unit notifies said data laying-out unit of completion of releasing of the one or more memory areas after releasing the one or more memory areas (processing prepared for reception of the next PDL data) (col. 18, lines 62-65)

20. Regarding Claim 28, Fukuta discloses an apparatus, wherein said one or more memory areas are outside control of an operating system that controls the running of said one or more programs and the hardware resources (developed data stored in the memory and/or the HDD) (col. 13, lines 35-57).

21. Regarding Claim 29, Fukuta discloses a method of acquiring one or more memory areas in an image forming apparatus (Fig. 3, PDL buffer 3013), in which hardware resources for use in the forming of images are provided, and one or more processes run based on programs in respect of the forming of images (color copying machines 120, 121), the running of the programs and the hardware resources being controlled by an operating system (Fig. 3, CPU 3011), said method comprising: an off-line step of putting said one or more processes in a off-line state in which restriction is placed on the running of said one or more processes (one color copying machine

cannot perform actual printing because of an engine error); a memory area releasing step of releasing one or more memory areas used by said one or more processes that are put in the off-line state (entire memory is allocated to the PDL developing task corresponding to the other color copying machine capable of printing); and a data laying-out step of laying out data in said one or more memory areas released by said memory area releasing step (PDL developing task) (col. 9, lines 39-49).

22. Regarding Claim 30, Fukuta discloses a method, further comprising a process terminating step of terminating said one or more processes having shifted to the off-line state (Fig. 14, S1409, 1408, save developed data and release memory) (col. 16, lines 11-21).

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

24. Claims 15-18, 22-27, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuta in view of Chrisop (US 7,212,306).

25. Regarding Claim 15, Fukuta fails to teach an apparatus, wherein said process terminating unit terminates said one or more processes in a predetermined order.

26. Chrisop et al teach an apparatus, wherein said process terminating unit terminates said one or more processes in a predetermined order (Fig. 4, S409a, S409b) (col. 6, lines 17-26).

27. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Fukuta with the teaching of Chrisop to prioritize the MFP functions

28. Regarding Claim 16, Fukuta fails to teach an apparatus, wherein said order is defined according to priority assigned to each of said one or more processes.

29. Chrisop et al teach an apparatus, wherein said order is defined according to priority assigned to each of said one or more processes (Fig. 4, S409a, S409b) (col. 6, lines 17-26).

30. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Fukuta with the teaching of Chrisop to prioritize the MFP functions

31. Regarding Claim 17, Fukuta fails to teach an apparatus, wherein said order is defined according to size of memory areas allocated to the one or more respective processes.

32. Chrisop et al teach an apparatus, wherein said order is defined according to size of memory areas allocated to the one or more respective processes (Fig. 4, S404) (allocation of RAM for MFP functions) (col. 5, lines 37-53).

33. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Fukuta with the teaching of Chrisop to allocate the memory according to the features of the MFP.

34. Regarding Claim 18, Fukuta fail to teach an apparatus, wherein said order is defined according to position of memory areas allocated to the one or more respective processes.

35. Chrisop et al teach an apparatus, wherein said order is defined according to position of memory areas allocated to the one or more respective processes (Fig. 4, S404) (allocation of RAM for MFP functions) (col. 5, lines 37-53).

36. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Fukuta with the teaching of Chrisop to allocate the memory according to the features of the MFP.

37. Regarding Claim 22, Fukuta fails to teach an apparatus, wherein the data laid out by said data laying-out unit is an updating program for updating at least one of the programs, and said data laying-out unit obtains the updating program through data communication.

38. Chrisop et al teach an apparatus, wherein the data laid out by said data laying-out unit is an updating program for updating at least one of the programs, and said data laying-out unit obtains the updating program through data communication (Fig. 4, S409b)(allocating additional RAM to a contending MFP function)(col. 6, lines 17-26).

39. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teaching of Fukuta with the teaching of Chrisop to reallocate the RAM according to MFP functions.

40. Regarding Claim 23, Fukuta fails to teach an apparatus, further comprising a program updating unit which updates at least one of the programs in response to a program updating start request sent from said data laying-out unit.

41. Chrisop et al teach an apparatus, further comprising a program updating unit which updates at least one of the programs in response to a program updating start request sent from said data laying-out unit (Fig. 4, S409b)(allocating additional RAM to a contending MFP function)(col. 6, lines 17-26).

42. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teaching of Fukuta with the teaching of Chrisop to reallocate the RAM according to MFP functions.

43. Regarding Claim 24, Fukuta teaches an apparatus, further comprising an input unit which is used to operate said apparatus, and said program updating unit invalidates said input unit when updating at least one of the programs (Fig. 8, S808, inhibit key inputs)(col. 11, lines 27-33).

44. Regarding Claim 25, Fukuta fails to teach an apparatus, wherein said program updating unit reboots said apparatus after completing the updating of at least one of the programs.

45. Chrisop et al teach an apparatus, wherein said program updating unit reboots said apparatus after completing the updating of at least one of the programs (Fig. 4, S410, rebooting to distributing allocations) (col. 6, lines 13-19).

46. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to reboot the MFP device to distribute the RAM memory allocations.

47. Regarding Claim 26, Fukuta fails to teach an apparatus, wherein said program updating unit notifies a device of status of the program updating, said device communicating with said apparatus.

48. Chrisop et al teach an apparatus, wherein said program updating unit notifies a device of status of the program updating, said device communicating with said apparatus (Fig. 4, S412-416) (allocation profiles) (col. 6, lines 22-26).

49. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Fukuta with the teaching of Chrisop to store the allocation profiles for future selections.

50. Regarding Claim 27, Fukuta teaches an apparatus, wherein said program updating unit notifies of the status of the program updating by use of a process that has shifted to the off-line state (Fig. 8, S802, notify image processing apparatus of error) (col. 11, lines 12-26).

51. Regarding Claim 31, Fukuta fails to teach a method, wherein the data laid out by said data laying-out step is an updating program for updating at least one of the programs.

52. Chrisop et al teach a method, wherein the data laid out by said data laying-out step is an updating program for updating at least one of the programs (Fig. 4, S409b)(allocating additional RAM to a contending MFP function)(col. 6, lines 17-26).

53. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teaching of Fukuta with the teaching of Chrisop to reallocate the RAM according to MFP functions.

Conclusion

54. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

AuClair (US 5,659,670) discloses a self configuring network/printer system.

Wakasugi (US 5,689,730) discloses a network interface apparatus adaptable to multifunction peripheral apparatus.

Ashe (US 6,999,188) discloses a dynamically configurable printer.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satwant K. Singh whose telephone number is (571) 272-7468. The examiner can normally be reached on Monday thru Friday 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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